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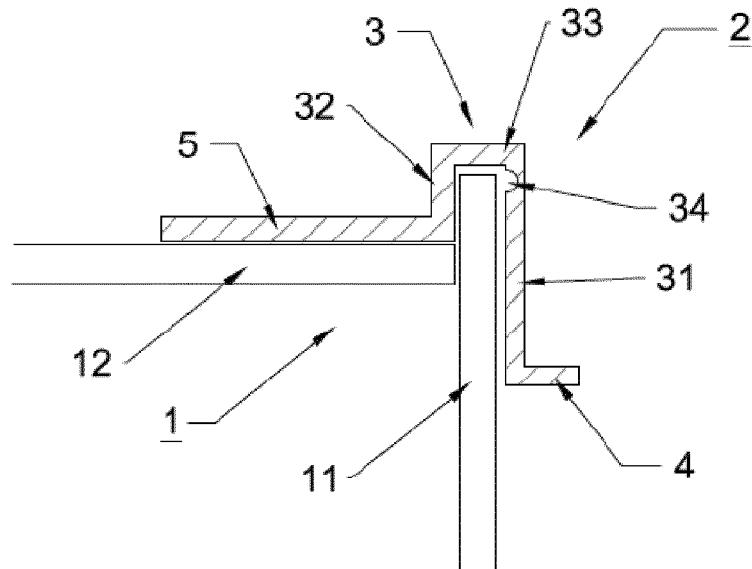
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(54) CLOSING DEVICE FOR AN OPEN FOOD CAN

(57) Closing device for an open food can, which is placed in the open circumference or rim 11 of the food can and where the can 1 still has the lid 12 thereof; this device is made from plastic material and has a transverse cross section comprising an inverted U-shaped central

profile 3 with an outer wall 31 facing an inner wall 32 and both remaining joined by an edge 33, and where a ridge 4 projects from the free end of the outer wall, and a fastening tab 5 projects from the free end of the inner wall.

Fig.1



Description**OBJECT OF THE INVENTION**

[0001] The present invention relates to a stop-like device or individual part that is used to close food cans that are open. This stop is an element that can be adapted to any type of food packaging and one of the advantages thereof is that it is reusable.

[0002] The general field of application of the present invention is the industry for producing plastic parts or elements, and particularly, this invention is also related to the industrial sector for producing packaging or lids for canned food products, in the same way that it is intended for domestic use or industrial use related to providing restoration services.

[0003] The object of the invention is to introduce a solution that enables food cans to be able to be closed, given that once this type of packaging is opened, it cannot be closed, which thus leads to the oxidisation or degradation of the characteristics of the food product, even if it is inside a refrigerator, just as it enables preventing accidental harm caused by unintentional cuts.

BACKGROUND

[0004] It is common knowledge that not all food maintains the optimal consumption conditions thereof for a prolonged amount of time. To solve this problem, the solution of food cans arose in the 19th century where certain types of elements were protected inside the packaging, which has logically evolved from the original packaging made of glass sealed with lead to the current solutions consisting of metal containers, the most common ones being made from tin and aluminium depending on the area and the product to be preserved.

[0005] All the types of known cans enable the food product to be preserved for a prolonged amount of time, but they only protect said product as long as the can is closed. Once a user opens the can, the food is irremediably subjected to degradation. Generally, in order to solve this problem, one attempts to cover the can again with the broken part, where one part continues to remain open, or a plastic film is placed thereon which is a weak film and is susceptible to being easily broken. This is combined with the insertion of the can into a refrigerator, which makes it so the degradation process is slower, but which may create another type of disadvantage such as the refrigerator becoming impregnated with the smell of the food, it can get dirty or other commonly derived disadvantages.

[0006] Thus, it is evident that a problem arises from preserving a food product protected inside a food can once said can is opened.

[0007] To this end, it is worth noting that, like in all the application fields, solutions have been created which intend to solve this problem. We will highlight certain registrations related to the present invention that have dif-

ferentiated structures. Regarding beverage cans, which are a type that the present invention is not preferably intended for, solutions have been developed such as the one disclosed in document ES2187937 where the opening of the can is reinforced with an annular bead with flanges which enables the coupling of a complementary closing lid. Document ES1069073U is also known, intended for cans with a particularly cylindrical configuration and the content of which is a liquid, which discloses

5 a complementary lid with an opening that can be opened and closed given that it is an element able to be articulated, and where said lid is coupled to the open face of the cylindrical can. Document ES1023228U is also notable, wherein a closing device for beverage cans is disclosed that can be coupled by means of a lever to the opening of said type of cylindrical cans. Finally, that which is disclosed in document ES1048748U is notable; it describes a closing lid for a can which, although preferably intended for cans with a cylindrical configuration, can be 10 modified for any type of configuration. It consists of a lid that is coupled and clipped on the rims of the can, closes the entire open surface, and further comprises a tab or ring that enables it to be pulled in order to facilitate the opening of said lid.

15 **[0008]** As can be seen, all these types of solutions are based on added lids or surfaces that are placed on all the open surface of the can, which makes it so the problem of the closing is solved; however, to do so it requires precisely covering the entire surface with another independent lid.

20 **[0009]** Taking into account the solutions existing in the state of the art, it can be seen that there is no known solution that closes food cans where one of the faces thereof is opened but not removed in its entirety; therefore, it does not require a new lid to be placed, but rather ensure that said open face returns to the position thereof such that it closes the assembly of the can again. In order to solve this problem, which is present in practically all the different types of food cans, preferably food cans not 25 intended for beverages or liquid products, but rather for solid foods, the present invention is developed. This invention introduces a simple device into this sector that can be coupled on the rims of the can and press on the open face so that it closes the assembly of the food can.

30 **[0010]** It can thus be noted that the present invention has a series of advantages, such as preventing or reducing the oxidation or degradation of the product, which among other things creates a mixture of smells in the refrigerator; it is used to prevent accidental harm from 35 unintentional cuts; it contributes to savings in the home as it also does with the environment when we avoid throwing away a number of cans because the food content thereof has gone bad too quickly since they were not properly closed; it prevents it from splashing when 40 an open, poorly closed can is taken out, for example, a can of squid in black ink sauce where the lid comes off like a spring, coming up and splashing everything nearby.

45 **[0011]** Thus, the present invention resolves the tech-

nical problem of ensuring the closing of a food can once opened without needing to clip or place a new lid on the open part of said food can, thereby ensuring that the product is conserved in optimal conditions for a longer amount of time and given the previously explained advantages.

DESCRIPTION OF THE INVENTION

[0012] The present invention describes a stop-like device or individual part that is used to ensure that a food can be closed again, said device being able to be reused, and with which this device resolves this problem without needing to use additional complex closing systems or the need to have to cover the entire can with a new cover.

[0013] Taking into account these aspects, the device object of the invention is a part that clips on the point of the open circumference of the can, and which, by means of a fastening tab, enables the open lid of the can to be pressed so that it is in a closed position. By means of the use of a plurality of devices along the circumference, it is ensured that the entirety of the lid of the can remains closed, without needing to use a new cover.

[0014] To do so, the device is an element of a preferably plastic nature, which has a transverse cross section with an inverted U-shaped profile, where a ridge projects from one side and a fastening tab projects of the other side of each of the facing walls thereof. The ridge is useful in that it enables the user to be able to press it for correct clipping inside the perimeter rim of the can, and also enabling the removal thereof; while the fastening tab has the feature of pushing and ensuring the position of the lid of the can so that the assembly remains covered.

[0015] Entering into more detail, the inverted U-shaped profile is comprised of two walls facing each other, an inner wall and an outer wall, joined by an upper edge. At least one surface slit can be arranged in the outer wall, the function of which is to enable the action of clipping and removing the device to be more comfortable and safer, and so that the device does not interfere with the tab of the lid of the can. The two walls do not necessarily have to have the same height, in fact, the height of the outer wall can be, for example, greater than that of the inner wall.

[0016] A ridge projects from the free end of the outer wall, preferably in a perpendicular plane, the ridge being a bent projection along all the entire rim thereof that is long enough so that a force can be exerted manually, like a lever, on the device. A fastening tab projects from the free end of the inner wall, which is also preferably in a perpendicular plane, which is a sheet which acts as a stop so that the lid of the can remains fastened on the lower surface thereof and thus requires the lid of the can to remain in a closed position.

[0017] Entering into a longitudinal configuration of the device, the surface of the fastening tab can comprise at least one notch that functions as a handle, which, at the same time that it continues to fasten the position of the lid of the food can, may have that additional feature.

Moreover, the device can adapt longitudinally to the circumference of the can; therefore, the device can be linearly straight for straight rims, or it can be curved for can configurations with curves, such that said curvature can have different diameters being adjusted to different types of food cans that exist in any grocery store in the world.

[0018] The device is intended to be made from a plastic material, and preferably it is intended to be made from PVC, given that this material has the light flexibility needed for the actions of clipping and removing the device from the rim of the can; however, it also has enough rigidity for the lid of the can to be fastened in the required position. Nevertheless, this term is not limiting, and the device can be made from any other material that meets these two conditions.

[0019] Finally, the device is intended for relatively small dimensions, due to the fact that the optimal closing of the lid of the open can requires a plurality of points where the device must be indicated along the circumference thereof.

[0020] To this end, it is considered that the optimal range of length of the device is between 10 and 100 mm, where the width of the fastening tab is between 7 and 15 mm, the width of the ridge between 2 and 7 mm, the width of the edge of the U-shaped profile between 1 and 5 mm, and the height of both walls of the U-shaped profile between 3 and 10 mm. Nevertheless, this term is not limiting, and any part of the device can have another dimension, as long as it meets the proportional relationship with the remaining parts of the device.

[0021] To complete the present description, and for the purpose of aiding in a better understanding of the characteristics of the invention, a set of drawings is presented wherein, by way of non-limiting examples, the following has been represented:

Figure 1 shows a transverse cross section of the device and how it is clipped or coupled to the perimeter rim of the can, and how the device fastens the open lid of the can.

Figure 2 shows a front view of the device.

Figure 3 shows a top view of the device when it has a straight linear configuration.

Figure 4 shows a top view of the device when it has a curved linear configuration and with a notch in the fastening overlap.

DESCRIPTION OF THE DRAWINGS

[0022] As seen in the set of figures, the closing device (2) for an open food can, according to the previously described characteristics, is placed in the open circumference or rim (11) of the food can and where the can (1) still has the lid (12) thereof which has not been completely removed.

[0023] This device (2) is made from plastic material, preferably PVC, and has a transverse cross section comprising a central inverted U-shaped profile (3) with an

outer wall (31) facing an inner wall (32) and both remaining joined by an edge (33). As seen in Figure 1, the height of both walls does not need to be the same, and in fact, preferably, the height of the outer wall (31) is greater than that of the inner wall (32), both of them thus having different heights. As seen in that figure, the rim (11) remains fitted by being clipped in the inverted U-shaped profile (3). A ridge (4) projects from the free end of the outer wall (31), preferably in a perpendicular plane, which has the function of reinforcing as well as enabling the user to use leverage to clip or remove the device (2). A fastening tab (5) projects from the free end of the inner wall (32), which is a sheet with a preferably larger dimension than that of the ridge (4) and that fastens the lid (12) of the can (1). It can be seen that the inner face of the outer wall (31) has a surface slit (34) which enables the action of clipping or removing the device (2) to be more comfortable.

[0024] As seen in Figures 3 and 4, the device (2) can have a straight or curved linear configuration, with the aim of being able to adapt to any type of circumference configuration of food cans, just as the device (2) can comprise a notch (6) with the function of freeing up space for the ring or handle of the food can, usually known as an easy-open element, said notch (6) being located in the surface of the fastening tab (5) seen from above.

[0025] Having sufficiently described the nature of the invention above, taking into account that the terminology that has been used in this specification should be taken in a broad and non-limiting sense, as well as the description of the best mode of carrying it out in practice, and, it having been proven that it constitutes a positive technical advancement, the essence of said invention being what is specified below in the following claims.

outer wall (31).

4. The closing device for an open food can, according to any of the preceding claims, which is **characterised in that** the fastening tab (5) comprises at least one notch (6).
5. The closing device for an open food can, according to any of the preceding claims, which is **characterised in that** the device (2) is linearly straight.
- 10 6. The closing device for an open food can, according to any of claims 1 to 4, which is **characterised in that** the device (2) is linearly curved.

Claims

1. A closing device for an open food can, which is placed in the open circumference or rim (11) of the food can and where the can (1) still has the lid (12) thereof, which is **characterised in that** the device (2) is made from plastic material and has a transverse cross section comprising an inverted U-shaped central profile (3) with an outer wall (31) facing an inner wall (32) and both remaining joined by an edge (33), and where a ridge (4) projects from the free end of the outer wall (31), and a fastening tab (5) projects from the free end of the inner wall (32).
2. The closing device for an open food can, according to claim 1, which is **characterised in that** the inner and outer walls (31, 32) have different heights.
3. The closing device for an open food can, according to claim 1 or 2, which is **characterised in that** it has at least one surface slit (34) in the inner face of the

Fig.1

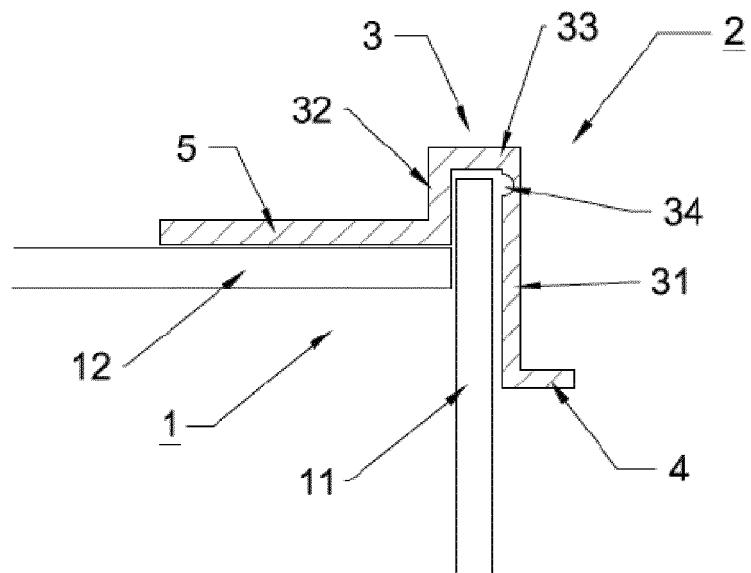


Fig.2

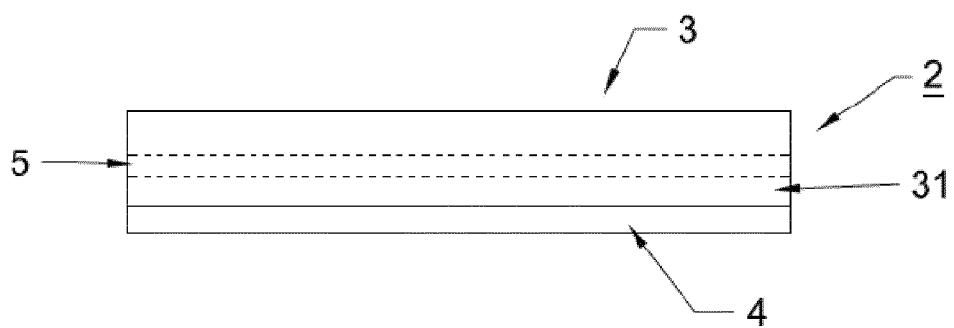


Fig.3

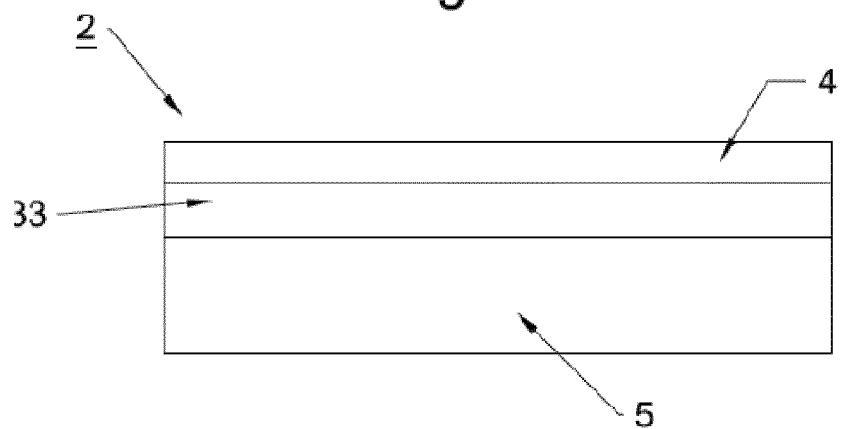
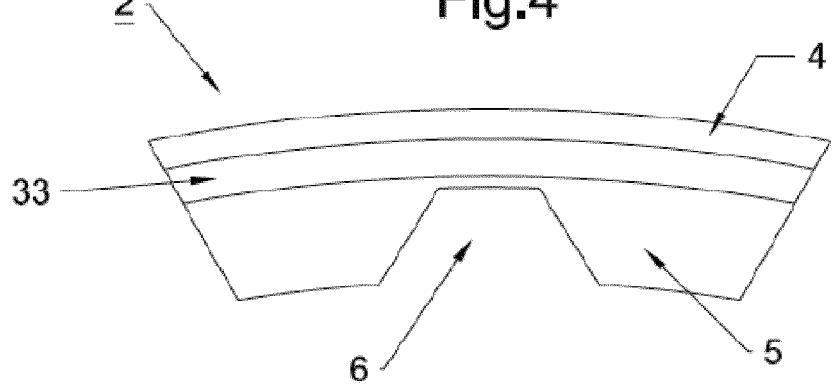


Fig.4





EUROPEAN SEARCH REPORT

Application Number

EP 18 38 2750

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55	CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document	T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	EPO FORM 1503 03-82 (P04C01)

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